4 Camera Video Surveillance System with Multi Camera Viewing

Instruction Manual

English Version 1.0



MODEL: SHS-4QM2



www.lorexcctv.com

Thank you for purchasing the SHS-4QM2. Lorex is committed to providing our customers with a high quality, reliable security product.

The SHS-4QM2 Video Surveillance System with 4 Indoor/Outdoor Cameras (2x Night Vision / 2x Daylight Only) is easy to set up (connects to any TV, VCR or Monitor) making this security system perfect for protecting your home, family and personal property. The Motion Detection feature notifies you when motion is detected through the cameras, and the 4 Color Cameras allow you to monitor multiple locations in and around your home with both video and audio. Multi camera viewing allows you to view all cameras simultaneously.

To learn more about this Video Surveillance Product, and to learn about our complete range of accessory products, please visit our website at:

http://www.lorexcctv.com



CAUTION

RISK OF ELECTRIC SHOCK DO NOT OPEN



CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK
DO NOT REMOVE COVER (OR BACK).
NO USER SERVICEABLE PARTS INSIDE.
REFER SERVICING TO A QUALIFIED SERVICE PERSONNEL



The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to persons.



The exclamation point within an equilateral triangle is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the appliance.

WARNING: TO PREVENT FIRE OR SHOCK HAZARD, DO NOT EXPOSE THIS UNIT TO RAIN OR MOISTURE.

CAUTION: TO PREVENT ELECTRIC SHOCK, MATCH WIDE BLADE OF PLUG TO WIDE SLOT, FULLY INSERT.

Important Safeguards

In addition to the careful attention devoted to quality standards in the manufacture process of your video product, safety is a major factor in the design of every instrument. However, safety is your responsibility too. This sheet lists important information that will help to assure your enjoyment and proper use of the video product and accessory equipment. Please read them carefully before operating and using your video product.

Installation

- Read and Follow Instructions All the safety and operating instructions should be read before the video product is operated. Follow all operating instructions.
- Retain Instructions The safety and operating instructions should be retained for future reference.
- 3. **Heed Warnings -** Comply with all warnings on the video product and in the operating instructions.
- 4. **Polarization -** Do not defeat the safety purpose of the polarized or grounding-type plug.

A polarized plug has two blades with one wider than the other.



A grounding type plug has two blades and a third grounding prong.

The wide blade or the third prong are provided for your safety.



If the provided plug does not fit into your outlet, consult an electrician for replacement of the obsolete outlet

- 5. .Power Sources This video product should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power supply to your location, consult your video dealer or local power company. For video products intended to operate from battery power, or other sources, refer to the operating instructions.
- 6. Overloading Do not overload wall outlets of extension cords as this can result in the risk of fire or electric shock. Overloaded AC outlets, extension cords, frayed power cords, damaged or cracked wire insulation, and broken plugs are dangerous. They may result in a shock or fire hazard. Periodically examine the cord, and if its appearance indicates damage or deteriorated insulation, have it replaced by your service technician.
- 7. Power-Cord Protection Power supply cords should be routed so that they are not likely to be walked on or pinched by items placed upon or against them, paying particular attention to cords at plugs, convenience receptacles, and the point where they exit from the video product.

- 8. Ventilation Slots and openings in the case are provided for ventilation to ensure reliable operation of the video product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the video equipment on a bed, sofa, rug, or other similar surface. This video product should never be placed near or over a radiator or heat register. This video product should not be placed in a built-in installation such as a bookcase or rack unless proper ventilation is provided or the video product manufacturer's instructions have been followed.
- Attachments Do not use attachments unless recommended by the video product manufacturer as they may cause a hazard.
- 10. Water and Moisture Do not use this video product near water. For example, near a bath tub, wash bowl, kitchen sink or laundry tub, in a wet basement, near a swimming pool and the like.

Caution: Maintain electrical safety. Powerline operated equipment or accessories connected to this unit should bear the UL listing mark of CSA certification mark on the accessory itself and should not be modified so as to defeat the safety features. This will help avoid any potential hazard from electrical shock or fire. If in doubt, contact qualified service personnel.

11. Accessories - Do not place this video equipment on an unstable cart, stand, tripod, or table. The video equipment may fall, causing serious damage to the video product. Use this video product only with a cart, stand, tripod, bracket, or table recommended by the manufacturer or sold with the video product. Any mounting of the product should follow the manufacturer's instructions and use a mounting accessory

recommended by the manufacturer.

Service

- 13. Servicing Do not attempt to service this video equipment yourself as opening or removing covers may expose you to dangerous voltage or other hazards. Refer all servicing to qualified service personnel.
- 14. Conditions Requiring Service Unplug this video product from the wall outlet and refer servicing to qualified service personnel under the following conditions.
 - A. When the power supply cord or plug is damaged.
 - B. If liquid has been spilled or objects have fallen into the video product.
 - C. If the video product has been exposed to rain or water.
 - D. If the video product does not operate normally by following the operating instructions. Adjust only those controls that are covered by the operating instructions. Improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the video product to its normal operation.
 - E. If the video product has been dropped or the cabinet has been damaged.
 - F. When the video product exhibits a distinct change in performance. This indicates a need for service.
- 15. Replacement Parts When replacement parts are required, have the service technician verify that the replacements used have the same safety characteristics as the original parts. Use of replacements specified by the video product manufacturer can prevent fire, electric shock or other hazards.
- 16. Safety Check Upon completion of any service or repairs to this video product, ask the service technician to perform safety checks recommended by the manufacturer to determine that the video product is in safe operating condition.
- 17. Wall or Ceiling Mounting The cameras provided with this system should be mounted to a wall or ceiling only as instructed in this guide, using the provided mounting brackets.
- 18. Heat The product should be situated away from heat sources such as radiators, heat registers, stoves, or other products (including amplifiers) that produce heat.

Use

- Cleaning Unplug the video product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.
- 20. Product and Cart Combination Video and cart combination should be moved with care. Quick stops, excessive force, and uneven surfaces may cause the video product and car combination to overturn.
- 21. Object and Liquid Entry Never push objects for any kind into this video product through openings as they may touch dangerous voltage points or "short-out" parts that could result in a fire or electric shock. Never spill liquid of any kind on the video product.
- 22. Lightning For added protection for this video product during a lightning storm, or when it is left unattended and unused for long periods of time, unplug it from the wall outlet and disconnect the antenna or cable system. This will prevent damage to the video product due to lightning and power line surges.

NOTE

This equipment has been certified and found to comply with the limits regulated by FCC, EMC, and LVD. Therefore, it is designated to provide reasonable protection against interference and will not cause interference with other appliance usage.

However, it is imperative that the user follows this manuals guidelines to avoid improper usage which may result in damage to the unit, electrical shock and fire hazard injury

In order to improve the feature functions and quality of this product, the specifications are subject to change without notice from time to time.

FCC CLASS B NOTICE

Note:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception (which can be determined by turning the equipment on and off), the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected
- Consult the dealer or an experienced radio or television technician for assistance

General Precautions

- 1. All warnings and instructions of this manual should be followed
- 2. Remove the plug from the outlet before cleaning. Do not use liquid aerosol detergents. Use a water dampened cloth for cleaning
- 3. Do not use this unit in humid or wet places
- 4. Keep enough space around the unit for ventilation. Slots and openings in the storage cabinet should not be blocked
- 5. During lightning storms, or when the unit is not used for a long time, disconnect the power supply, antenna, and cables to protect the unit from electrical surge

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SHS-4QM2 FEATURES

- Indoor/Outdoor, Weather Resistant Color Cameras
- IR illumination provides night vision up to 5 meters (on 2 Night Vision Cameras only)
- Support various display modes: QUAD Split Mode, Full Screen Mode, PIP Screen Mode.
- System with remote control for easy operation.
- Easily connects to your TV or VCR
- Multi camera viewing allows you to view all cameras simultaneously
- Motion Detection alerts the user and automatically switches to the camera

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Getting Started

The SHS-4QM2 comes with the following components:



Quad Processor / Switcher



2 x Weatherproof Color Cameras with Stands



2 x Weatherproof Color Day/Night IR Cameras with Stands



4 x 60' DIN Extension Cables



DIN Video Cable



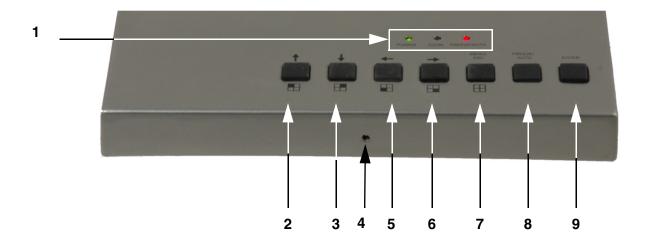
Remote Control



Swticher Power Adapter

CHECK YOUR PACKAGE TO CONFIRM THAT YOU HAVE RECEIVED THE COMPLETE SYSTEM, INCLUDING ALL COMPONENTS SHOWN ABOVE.

SHS-4QM2 - Front View



1. LED INDICATORS:

- POWER Indicates the Power Status (On/OFF)
- ZOOM Indicates the system is in ZOOM Mode.
- FREEZE/AUTO Indicates the system is in FREEZE/AUTO SEQUENCE Mode.

2. CHANNEL 1 / UP BUTTON -

- Changes the view to CAM 1 in Viewing Mode.
- Navigates UP in MENU Mode.

3. CHANNEL 2 / DOWN BUTTON -

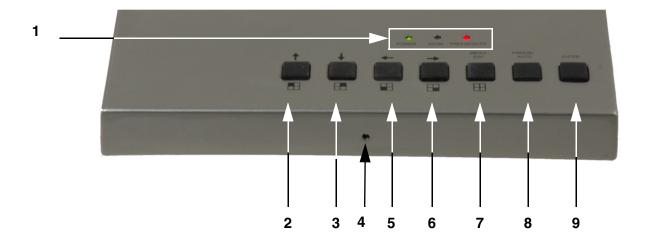
- Changes the view to CAM 2 in Viewing Mode.
- Navigates DOWN in MENU Mode.
- 4. IR RECEIVER Infrared receiver for Remote Control.I

5. CHANNEL 3 / LEFT BUTTON -

• Changes the view to CAM 3 in Viewing Mode.

Navigates LEFT in MENU Mode.

SHS-4QM2 - Front View



6. CHANNEL 4 / RIGHT BUTTON -

- Changes the view to CAM 4 in Viewing Mode.
- Navigates RIGHT in MENU Mode.

7. QUAD / MENU / ESC BUTTON -

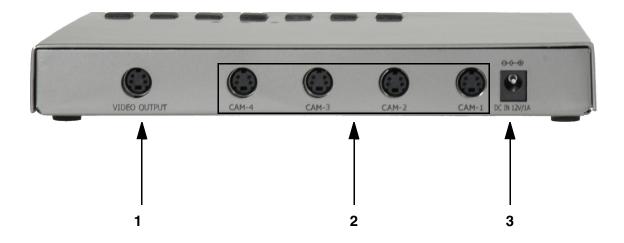
- Changes the view to QUAD in Viewing Mode.
- Press and hold for 3 seconds to Enter or Exit MENU mode.

8. FREEZE / AUTOSCAN BUTTON -

- Press and briefly hold to freeze the onscreen image. Press the FREEZE button again to return to regular viewing.
- Press and hold for 3 seconds to set the SHS system to AUTOSCAN through CAM1~CAM4 and QUAD.

ENTER BUTTON - Accepts Menu changes while in MENU MODE.

SHS-4QM2 - Rear View



- 1. **DIN OUTPUT** Connects the DIN Video cable to a TV/Monitor.
- 2. CAM1 CAM4 DIN INPUTS Camera inputs (for cameras with 4 pin DIN connection).
- 3. **DC 12V** Connects the 12V DC Power adapter

Remote Control

Listed below is a quick reference for the Remote Control. For details on specific features, refer to the Menu Setup on page #.

MENU BUTTON -

Enters Menu Setup

NAVIGATION / ENTER -

The NAVIGATION / ENTER BUTTONS are used to move Left / Right / Up / Down.

FRZ BUTTON -

Press the FRZ button to Freeze a full screen camera display. Press the FRZ button to unfreeze the current display.

ZOOM BUTTON -

Press to Zoom in the current display. Use the NAVIGATION BUTTONS to select an area, and press ZOOM to exit.

AUTO BUTTON -

Auto sequences between CAM1~CAM4 and QUAD.

DISPLAY BUTTONS -

Press to enter display modes:



QUAD MODE - Displays all 4 Cameras in Quad.



PIP (1) MODE - Displays one camera in Full Screen and two cameras in PIP mode (sub-screens).



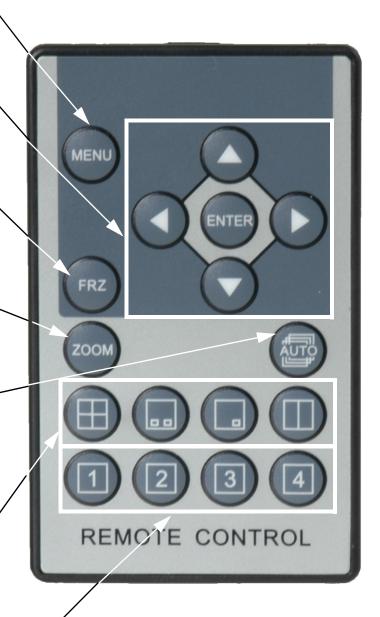
PIP (2) MODE - Alternate PIP Display Mode.



2-CAM MODE - Displays two cameras onscreen.

CHANNEL BUTTONS -

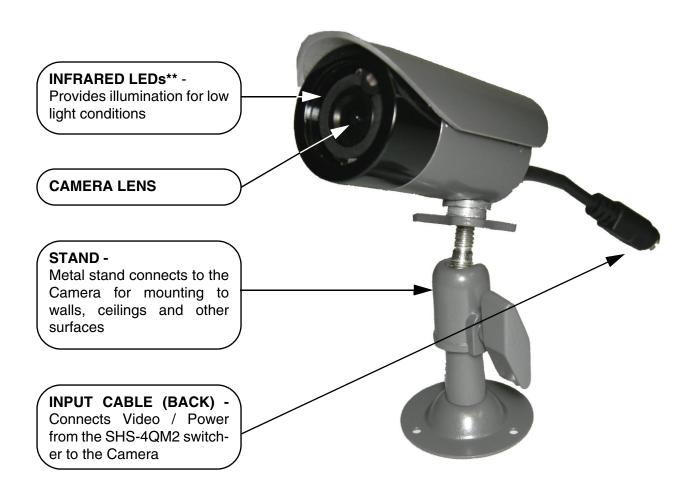
Press to access CAM1~CAM4.



SHS-4QM2 Cameras

The SHS-4QM2 Quad Switcher / Processor includes 4 CCD Color Indoor/Outdoor Cameras*

(2x Night Vision / 2x Daylight Cameras Only. Cameras with a BLACK BAND indicate NIGHT VISION)



^{*} Picture changes from Color to B&W under low light conditions on Night Vision Cameras Only.

^{**} Only the Night Vision Model Shown has IR LEDS for Night Vision

Camera Installation

Before you install the camera, carefully plan where and how you will position the camera, and where you will route the cable that connects the camera to the SHS-4QM2.

Installation Warnings:

- Select a location for the camera that provides a clear view of the area you want to monitor, which is free from dust, and is not in line-of-sight to a strong light source or direct sunlight.
- Plan the cables' route so that it is not close to power or telephone lines, transformers, microwave ovens or other electrical equipment that could interfere with the system.
- Select a location for the camera that has an ambient temperature between 14°F~122°F (-10°C~50°C)
- If you plan to install the camera in a location that has conditions not recommended in this manual, consult with a professional installer and consider use of a separate camera cover or housing
- Before starting permanent installation, have another person hold the camera for you while you verify its performance by observing the image on the monitor.

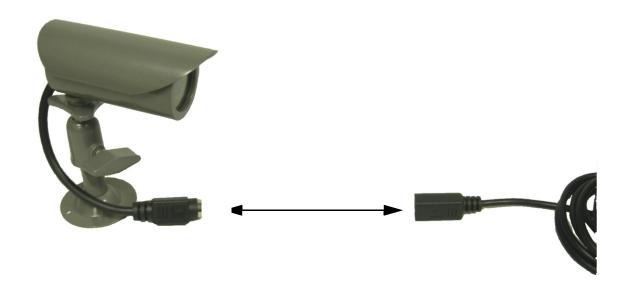
Camera Stand Installation:

- Attach the pedestal to the ceiling, wall or other surface by the base using the provided screws.
- The mounting bracket must be attached to a structural device such as a wall stud or ceiling rafter using the supplied screws.
- 3. Attach the camera to the pedestal. Adjust the angle of the camera, and tighten the thumbscrew to set the position



Connecting Cameras

1. Connect the female end of the supplied 60' extension' cable to the camera.



NOTE: Confirm that the arrows on the DIN Camera Cable and the DIN Extension cable are pointed together when connecting the cable. If the pins in the DIN Cable are bent, the Camera will NOT function.



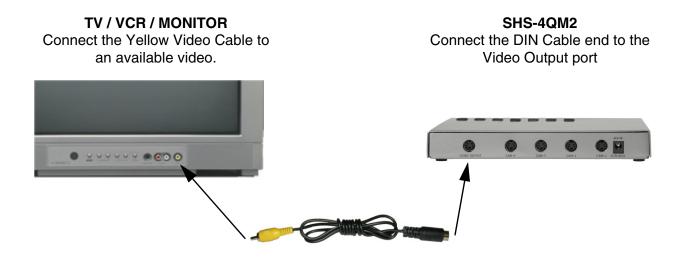
2. Connect the male end of the supplied 60' extension cable to an open DIN channel on the back of the SHS-4QM2. Continue connecting additional DIN cameras.



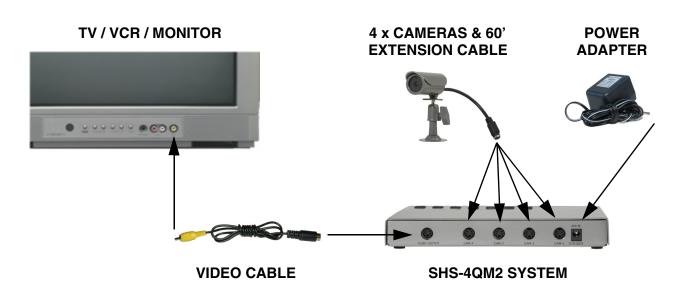
NOTE: The arrow on the DIN Camera should be facing up when connecting the DIN Extension Cable to the SHS-4QM2.

Connecting the SHS-4QM2 Video Cable

Connect the DIN end of the Video Cable to the SHS-4QM2. Connect the RCA VIdeo cable to the TV, VCR or Monitor.

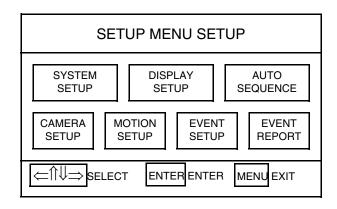


Connectivity Diagram



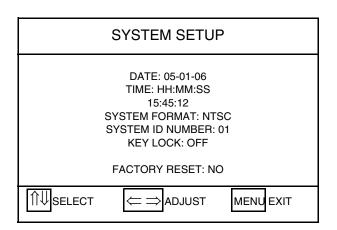
Menu Setup

- Press the MENU button for 3 seconds to enter Menu Mode.
- Press the OK Button to accept the selection (labelled as ENTER in menu options)
- Press the MENU button to Exit the Menu Setup.



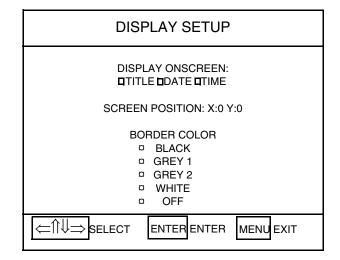
System Setup

- KEYLOCK Locks out the keys on the SHS System. Press the ⇐⇒ buttons to enable or disable the KEYLOCK.
- **SYSTEM ID** Displays the System ID. This menu function cannot be changed.
- Press the MENU button to EXIT. All settings will be saved.



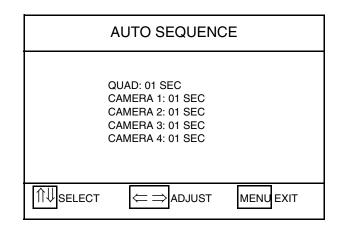
Display Setup

- DISPLAY ONSCREEN Press the ↑ ←
 ⇒ ↓ buttons to navigate to the desired selection. Press the enter button to set the Display Options for Title, Date and Time to ON/OFF.
- SCREEN POSITION Changes the position of the screen. Press the ↑ ↓ buttons to navigate, and press the ← ⇒ buttons to adjust the setting.
- BORDER COLOR Sets the Border Color to Black, Grey 1, Grey 2, White or Off. Press the ↑ ← ⇒ ↓ buttons to navigate to the desired selection. Press Enter to select ONE color.
- Press the MENU button to EXIT. All settings will be saved.



Auto Sequence

- QUAD / CAMERA 1~4 Press the ↑↓ buttons to navigate to the desired selection. Press the ←⇒ buttons to adjust the AUTO SEQUENCE time from 01~99 Seconds or SKIP.
- Press the MENU button to EXIT. All settings will be saved.



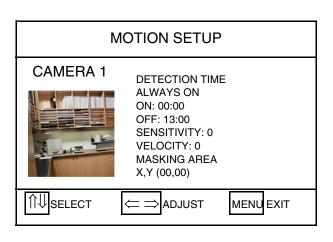
Camera Setup

- SWITCH BETWEEN CAMERAS Use the ⇐⇒ buttons to switch between CAMERA 1~4.
- TITLE Sets the name for the individual Camera. Press the ↑ ↓ buttons to navigate, and press the ← ⇒ buttons to select a character (A-Z, 0-9).
- BRIGHTNESS / CONTRAST / SATURATION / HUE / SHARPNESS -Individual camera display settings. Press the ↑ ↓ buttons to navigate, and press the ← ⇒ buttons to set the value.
- Press the MENU button to EXIT. All settings will be saved.

CAMERA SETUP CAMERA 1 TITLE: CAMERA01 BRIGHTNESS: 0 CONTRAST: 0 SATURATION: 0 HUE: 0 SHARPNESS: 0 MIRRORING: OFF SELECT ADJUST MENU EXIT

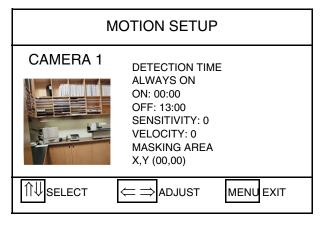
Motion Setup

- SWITCH BETWEEN CAMERAS Use the ← ⇒ buttons to switch between CAMERA 1~4.
- **DETECTION TIME** Turns Motion Detection to ALWAYS ON, ALWAYS OFF or ON/OFF TIME. Individual cameras can be set by pressing the . to switch between CAM1~CAM4. Press the ↑ ⇒ buttons to navigate, and press the ← ⇒ buttons to set the Detection Time:
 - ALWAYS ON Motion is always detected
 - ALWAYS OFF Motion is never detected
 - ON/OFF TIME Sets the start and end times that motion is to be detected. Set the ON and OFF times using the directional arrows to adjust.



Motion Setup

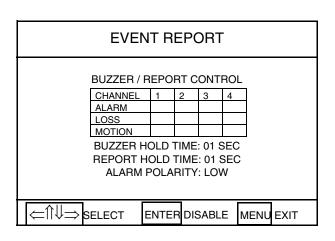
- **SENSITIVITY** Sets the Motion Sensitivity. Press the ↑ ↓ buttons to navigate, and press the ← ⇒ buttons to set the values (min~max).
- VELOCITY Sets the Motion Velocity. Press the ↑ ↓ buttons to navigate, and press the ← ⇒ buttons to set the values (min~max).
- Press the MENU button to EXIT. All settings will be saved.



Event Setup

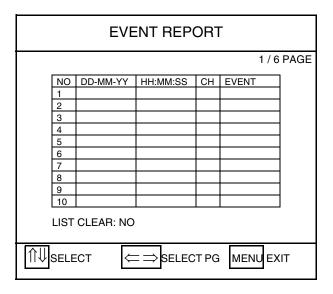
Configuration for Alarm Reporting:

- ALARM A report is generated when the power is turned ON
- LOSS A report is generated when a camera has Signal Loss.
- MOTION A report is generated when a camera detects motion.
- BUZZER HOLD TIME Sets the audible buzzer time (when motion is detected) between 0~99 seconds.
- REPORT HOLD TIME Enables or Disables the Report Hold time from 0~99 seconds
- ALARM POLARITY Reports on the Power On Alarm. Check off all 4 Alarm Boxes, and set the POLARITY to HIGH. If the POLARITY is set to LOW, the POWER ON ALARM will not function.



Event Report

- 6 Pages of EVENT REPORTS are available.
- Reports can be deleted by selecting the LIST CLEAR option, and setting to YES
- Press any button on the SHS-4QM2 (except the OK button) to stop the Audible Alarm



SHS-4QM2 System Specifications - Appendix #1

Control Box Specifications

Channel Scan Period	1~99 Seconds (adjustable)
Video Format	NTSC/PAL
Current Consumption	< 1000 mA
Power Supply	12V DC 1500mA
Video Input	4 DIN
AV Output	1 DIN

Camera Specifications

Image Sensor	1/4" Color CCD
Pixels	512 (H) x 492 (V) NTSC
Video Format	NTSC
Horizontal Resolution	380 TV Lines
Minimum Illumination	1 LUX F1.2
Electric Shutter Speed	1/60~1/100,000 sec.
S/N Ratio	> 48 db
Video Output	1.0 Vp-p/75 ohm
Lens	3.6mm Fixed
IR LEDs	0 (on Color Cameras)
	11 (on Night Vision Cameras only)
Power Consumption	12V DC 100mA (LED OFF); 200mA (LED ON)
Operating Temperature	14°~ 122° F (-10° ~ 50° C)

It's all on the web

- Product Information
- **Specification Sheets**
- User Manuals
- Software Upgrades
- Quick Start Guides
- (📵 Firmware Upgrades





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